

and an internucleoside linker. See page 22, lines 1 and 2. The elections of nucleobase (3.1), sugar moiety (3.2), and internucleoside linker (3.3) are consistent with the election of oligonucleotide as the template. For reactive group, see 3.5.

3.1. According to the specification, a nucleobase moiety can be a natural nucleobase moiety or a non-natural nucleobase moiety (see page 22, lines 5 and 6). The natural nucleobase moiety can be a natural purine or pyrimidine heterocycle (see page 22, lines 9 and 10). The non-natural nucleobase moiety can be a heterocyclic analogue or tautomer of a natural purine or pyrimidine heterocycle (see page 22, lines 9 and 10). Examples of specific nucleobases are listed on page 22, lines 11 to 17.

Applicant elects natural nucleobases, i.e., the bases of DNA and CNA. If further specificity is required applicants elect the bases of DNA. As a template (and the codons contained by the template) will be composed of different nucleobases (see e.g. Examples 1 and 2), it does not make sense to elect exclusively a single nucleobase, such as a single nucleobase among the nucleobases cited on page 22, lines 11 and 12.

3.2. As the sugar, Applicant elects the pentoses of RNA (ribose) and DNA (2'-deoxyribose). If further specificity is required, applicants elect 2'-deoxyribose, which is the pentose of DNA.

3.3. The specification teaches that the internucleoside linker can be natural internucleoside linker or a non-natural internucleoside linker. A natural internucleoside linker is in the form of a phosphodiester linkage. Non-natural internucleoside linkers are derivatives thereof, such as phosphorothioate, methylphosphonate, phosphoramidate, phosphotriester and phosphodithioate (see page 2, lines 28 to 32).

Applicant elects the natural (phosphodiester) linker, which is the linker found in both DNA and RNA.

3.4. Thus, Applicant has in effect elected a natural DNA oligonucleotide as a template species. The number of natural deoxyribonucleotides occurring in DNA is limited to 4 species (A,

C, G, T, see page 23, lines 4 to 7) - each of said species can occur in a template according to the present invention (cf. Examples 1 and 2) - in which case it is not possible for Applicant to be more specific in his election of a species of template. We reiterate that the Examiner, in the telephonic interview, agreed.

3.5. As to the template reactive group, Applicant elects a reactive group which is covalently linked to the template (cf. claim 2 as filed). The template reactive group can e.g. be an amine group, cf. page 25, line 25 and Fig. 21 (chemical drawing)).

As the specific reactive group, Applicant elects an amine group covalently linked to the template.

4. Election of species of building block

Applicant elects as a species of building block a heterocycle (page 24, line 29) linked by a natural polynucleotide (page 23, line 29) to an anti-codon in the form of a natural DNA oligonucleotide (page 7, lines 9 to 11) capable of hybridizing to the codon of a template (as elected herein above). If further specificity is required, Applicant elects the particular heterocyclic compound which is the left most compound in Figure 13, ex- 3.1 "urea formation" (19/60).

In the telephonic interview held September 9, the Examiner said that this election would be acceptable.

5. Election of species of chemical connection

In response to the requirement to elect a species of chemical connection, Applicant elects an amide bond (cf. Fig. 20, panel B - illustrating a chemical drawing of a reaction involving the reaction of an amine (reactive group) and an activated ester).

6. Election of Species of Predetermined Activity.

As we read the requirement, it applies only if group IV

is elected. While we have elected group III, we have traversed the restriction III/IV and hence we elect affinity as the species of predetermined activity merely in order to expedite examination if IV is rejoined.

Claims 52-63 are generic to or read upon the elected species.

7. Election of a species of enrichment step.

As we read the requirement, it applies only if group IV (containing claims 52, 61) is elected.

We believe the assertion that "Currently, claims 52, 61 are generic for invention II" is erroneous since page 2 defines group IV as claims 52-63.

While we have elected group III, we have traversed the restriction III/IV and hence we elect immobilization as the species of enrichment method in order to expedite examination if IV is rejoined.

8. Traversal of Group-Level Restriction

8.1. Applicants have elected group III (claim 51), directed, according to the Examiner, to "a library of templated molecules".

The claims of group I (claim 1-45, 64, 65) are directed to "a method for the making of a library of templated molecules"¹. No step of claim 1 is inconsistent with the library of claim 51, indeed, claim 51 reads "a library of complexes obtainable according to claim 1". Claim 1 is properly construed as a claim to a process specially adapted to making the product of claim 51.

The claims of group IV (52-63) are directed to "a method of enriching a library of complexes comprising templated molecules", and the first step is "establishing a first

¹ More precisely, claims 1-45 are directed to a method of making a library of templated molecules, and claims 64 and 65 to an analogous method of making a single templated molecule.

library... obtainable according to claim 1". The library is exposed to enrichment conditions in step (ii), and complexes of the enriched library are amplified in step (iii). It is thus directed to use of the library of group III.

Under the PCT Administrative Instructions, Annex B, paragraph (e)(1) unity is not destroyed by the presentation in a single application, "in addition to an independent claim for a given product, an independent claim for a process especially adapted for the manufacture of the said product and an independent claim to a use of the said product". Thus, at least groups I and IV should be rejoined with group III.

8.2. Groups I, II and IV are also related to each other.

Group I (claims 1 to 45; 64; 65) is directed to a "multi-step" method for making a library of compounds ("templated molecules") (claims 1 to 45) as well as a method for making a single "templated molecule" (claims 64 and 65). Method steps a) through i) of claims 1 and 64 are analogous - expect that claim 64 does not cite a plurality of templates.

The claims of Group II (claims 46 to 50) all depend on claim 1 (directly or indirectly). PCT Administrative Instructions, Annex B, paragraph (c)(i) says

"If the independent claims avoid the prior art and satisfy the requirement of unity of invention, no problem of lack of unity arises in respect of any claims that depend on the independent claims. In particular, it does not matter if a dependent claim itself contains a further invention".

The group II claims simply recite an additional step, hence there is a combination/subcombination relationship between group II and group I. Paragraph (c)(i) states "no problem arises in the case of a combination/subcombination situation where the subcombination claim avoids the prior art and the combination claim includes all the features of the

subcombination".

Hence, we believe that the additional step cited in claim 46 cannot justify restricting this claim from Group I. Claims 46 to 50 should be rejoined with the Group I claims.

Group IV is directed to claims 52 to 63. However, main method claim 52 incorporates the method of claim 1 (although "obtainable" and not "obtained" is cited in the claim). The fact that the library cited in method claim 52 is obtainable according to the method of claim 1 means that claim 52 also cites the library when it is directly obtained by the method of claim 1. Claims 52 to 63 should be rejoined with the Group I claims and restriction is improper.

In summary, at least Groups I, II and IV should be joined into a single group.

8.3. The Examiner cites Walder as a reference depriving the claims of a general inventive concept. We do not agree. Walder is not directed to methods for synthesizing a library. Furthermore, Walder does not provide a "plurality of different building blocks" in a single synthesis method.

9. Traversal of Species Restrictions

Furthermore, the Examiner cites (on page 4 in the OA) Rule 13.2 PCT as the legal basis permitting the restriction of species to separate inventions. However, the Examiner overlooks that Rule 13.2 PCT cites "same or corresponding technical features". Separate species - as defined by the Examiner - can well be "corresponding" in nature - i.e. providing the same technical result - in which case restriction under PCT rules is more than questionable.

More particularly, the PCT Administrative Instructions, Annex B ("Unity of Invention") paragraph (c)(2) states "no problem arises in the case of a genus/species situation where the genus claim avoids the prior art".

10. Claims Reading on Group and Species After Amendment

It is noted that on even date herewith, applicants filed an amendment which amended claim 51 and added claims 68-81.

New claims 66-81 are library claims dependent on claim 51, and it is believed they should be grouped therewith.


Claims 51 and 66-78 read upon the elected template. (Claim 79 recites a non-natural nucleobase moiety, claim 80 a non-natural sugar moiety, and claim 81 a non-natural nucleoside linker.)

Claims 51 and 66-81 read upon the elected building block (note reference to "heterocycles" in claims 66 and 67).

Claims 51 and 66-81 read upon the elected chemical connection.

Respectfully submitted,

BROWDY AND NEIMARK, P.L.L.C.
Attorneys for Applicant

By: 
Iver P. Cooper
Reg. No. 28,005

624 Ninth Street, N.W.
Washington, D.C. 20001
Telephone: (202) 628-5197
Facsimile: (202) 737-3528
IPC:lms
G:\ipc\g-i\hoib\PEDERSEN12\pedersen12.pto electiontraverse.wpd